

	10	20	30	40	50	60															
1	GCA	GGC	GCG	CCG	GAG	CCG	GCC	CCG	TAG	CGT	GCC	ATG	GCC	TGC	TAC	ATC	TAC	CAG	CTG	CCC	60
1											M	A	C	Y	I	Y	Q	L	P		9
	70	80	90	100	110	120															
61	TCC	TGG	GTG	CTG	GAC	GAC	CTG	TGC	CCG	AAC	ATG	GAC	GCG	CTC	AGC	GAG	TGG	GAC	TGG	ATG	120
10	S	W	V	L	D	D	L	C	R	N	M	D	A	L	S	E	W	D	W	M	29
	130	140	150	160	170	180															
121	GAG	TTC	GCC	TCC	TAC	GTG	ATC	ACA	GAC	CTG	ACC	CAG	CTG	CCG	AAG	ATC	AAG	TCC	ATG	GAG	180
30	E	F	A	S	Y	V	I	T	D	L	T	Q	L	R	K	I	K	S	M	E	49
	190	200	210	220	230	240															
181	CGG	GTG	CAG	GGT	GTG	AGC	ATC	ACG	CCG	GAG	CTG	CTG	TGG	TGG	TGG	GGC	ATG	CCG	CAG	GCC	240
50	R	V	Q	G	V	S	I	T	R	E	L	L	W	W	W	G	M	R	Q	A	69
	250	260	270	280	290	300															
241	ACC	GTC	CAG	CAA	CTT	GTG	GAC	CTC	CTG	TGC	CGC	CTG	GAG	CTC	TAC	CCG	GCT	GCC	CAG	ATC	300
70	T	V	Q	Q	L	V	D	L	L	C	R	L	E	L	Y	R	A	A	Q	I	89
	310	320	330	340	350	360															
301	ATC	CTG	AAC	TGG	AAA	CCG	GCT	CCT	GAA	ATC	AGG	TGT	CCC	ATT	CCA	GCC	TTC	CCT	GAC	TCT	360
90	I	L	N	W	K	P	A	P	E	I	R	C	P	I	P	A	F	P	D	S	109
	370	380	390	400	410	420															
361	GTG	AAG	CCA	GAA	AAG	CCT	TTG	GCA	GCT	TCT	GTA	AGA	AAG	GCT	GAG	GAT	GAA	CAG	GAA	GAG	420
110	V	K	P	E	K	P	L	A	A	S	V	R	K	A	E	D	E	Q	E	E	129
	430	440	450	460	470	480															
421	GGG	CAG	CCT	GTG	AGG	ATG	GCC	ACC	TTT	CCA	GGC	CCA	GGG	TCC	TCT	CCA	GCC	AGA	GCC	CAC	480
130	G	Q	P	V	R	M	A	T	F	P	G	P	G	S	S	P	A	R	A	H	149
	490	500	510	520	530	540															
481	CAG	CCG	GCC	TTT	CTC	CAG	CCT	CCT	GAA	GAA	GAT	GCC	CCT	CAT	TCC	TTG	AGA	AGC	GAC	CTC	540
150	Q	P	A	F	L	Q	P	P	E	E	D	A	P	H	S	L	R	S	D	L	169
	550	560	570	580	590	600															
541	CCC	ACT	TCG	TCT	GAT	TCA	AAG	GAC	TTC	AGC	ACC	TCC	ATT	CCT	AAG	CAG	GAA	AAA	CTT	TTG	600
170	P	T	S	S	D	S	K	D	F	S	T	S	I	P	K	Q	E	K	L	L	189
	610	620	630	640	650	660															
601	AGC	TTG	GCT	GGA	GAC	AGC	CTT	TTC	TGG	AGT	GAG	GCA	GAC	GTG	GTC	CAG	GCA	ACC	GAT	GAC	660
190	S	L	A	G	D	S	L	F	W	S	E	A	D	V	V	Q	A	T	D	D	209

FIG. 1A

	670	680	690	700	710	720	
661	TTC AAT CAA AAC CGC AAA ATC AGC CAG GCG ACC TTT GCT GAC GTC TAC AGA GCG CAC AGG	720					
210	F N Q N R K I S Q G T F A D V Y R G H R	229					
	730	740	750	760	770	780	
721	CAC GGG AAG CCA TTC GTC TTC AAG AAG CTC AGA GAG ACA GCC TGT TCA AGT CCA GGA TCA	780					
230	H G K P F V F K K L R E T A C S S P G S	249					
	790	800	810	820	830	840	
781	ATC GAA AGA TTC TTC CAG GCA GAG TTG CAG ATT TGT CTT AGA TGC TGC CAC CCC AAT GTC	840					
250	I E R F F Q A E L Q I C L R C C H P N V	269					
	850	860	870	880	890	900	
841	TTA CCT GTG CTG GGC TTC TGT GCT GCA AGA CAG TTT CAC AGC TTC ATC TAC CCC TAC ATG	900					
270	L P V L G F C A A R Q F H S F I Y P Y M	289					
	910	920	930	940	950	960	
901	GCA AAT GGT TCC CTA CAG GAC AGA CTG CAG GGT CAG GGT GGC TCG GAA CCC CTC CCC TCG	960					
290	A N G S L Q D R L Q G Q G G S E P L P W	309					
	970	980	990	1000	1010	1020	
961	CCC CAG CGT GTC AGC ATC TGC TCA GCG CTG CTC TGT GCC GTC GAG TAC CTG CAT GGT CTG	1020					
310	P Q R V S I C S G L L C A V E Y L H G L	329					
	1030	1040	1050	1060	1070	1080	
1021	GAG ATC ATC CAC AGC AAC GTC AAG AGC TCT AAT GTC TTG CTG GAC CAA AAT CTC ACC CCC	1080					
330	E I I H S N V K S S N V L L D Q N L T P	349					
	1090	1100	1110	1120	1130	1140	
1081	AAA CTT GCT CAC CCA ATG GCT CAT CTG TGT CCT GTC AAC AAA AGG TCA AAA TAC ACC ATG	1140					
350	K L A H P M A H L C P V N K R S K Y T M	369					
	1150	1160	1170	1180	1190	1200	
1141	ATG AAG ACT CAC CTG CTC CGG ACG TCA GCC GCG TAT CTG CCA GAG GAT TTC ATC CGG GTG	1200					
370	M K T H L L R T S A A Y L P E D F I R V	389					
	1210	1220	1230	1240	1250	1260	
1201	GGG CAG CTG ACA AAG CGA GTG GAC ATC TTC AGC TGT GGA ATA GTG TTG GCC GAG GTC CTC	1260					
390	G Q L T K R V D I F S C G I V L A E V L	409					
	1270	1280	1290	1300	1310	1320	
1261	ACG GGC ATC CCT GCA ATG GAT AAC AAC CGA AGC CCG GTT TAC CTG AAG GAC TTA CTC CTC	1320					
410	T G I P A M D N N R S P V Y L K D L L L	429					

FIG. 1B

	1330	1340	1350	1360	1370	1380	
1321	AGT GAA ATT CCA AGC AGC ACC GCC TCG CTC TGC TCC AGG AAG ACG GGC GTG GAG AAC GTG	1380					
430	S E I P S S T A S L C S R K T G V E N V	449					
	1390	1400	1410	1420	1430	1440	
1381	ATG GCA AAG GAG ATC TGC CAG AAG TAC CTG GAG AAG GGC GCA GGG AGG CTT CCG GAG GAC	1440					
450	M A K E I C Q K Y L E K G A G R L P E D	469					
	1450	1460	1470	1480	1490	1500	
1441	TGC GCC GAG GCC CTG GCC ACC GCT GCC TGC CTG TGC CTG CCG AGG CGT AAC ACC ACC CTG	1500					
470	C A E A L A T A A C L C L R R R N T S L	489					
	1510	1520	1530	1540	1550	1560	
1501	CAG GAG GTG TGT GGC TCT GTG GCT GCT GTG GAA GAG CCG CTC CGA GGT CCG GAG ACC TTG	1560					
490	Q E V C G S V A A V E E R L R G R E T L	509					
	1570	1580	1590	1600	1610	1620	
1561	CTC CCT TGG AGT GGG CTT TCT GAG GGT ACA GGC TCT TCT TCC AAC ACC CCA GAG GAA ACA	1620					
510	L P W S G L S E G T G S S S N T P E E T	529					
	1630	1640	1650	1660	1670	1680	
1621	GAC GAC GTT GAC AAT TCC AGC CTT GAT GCC TCC TCC TCC ATG AGT GTG GCA CCC TGG GCA	1680					
530	D D V D N S S L D A S S S M S V A P W A	549					
	1690	1700	1710	1720	1730	1740	
1681	GGG GCT GCC ACC CCA CTT CTC CCC ACA GAG AAT GGG GAA GGA AGG CTG CCG GTC ATC GTG	1740					
550	G A A T P L L P T E N G E G R L R V I V	569					
	1750	1760	1770	1780	1790	1800	
1741	GGA AGG GAG GCT GAC TCC TCC TCT GAG GCC TGT GTT GGC CTG GAG CCT CCC CAG GAT GTT	1800					
570	G R E A D S S S E A C V G L E P P Q D V	589					
1801	ACA TAA	1806					
590	T *	590					

FIG. 1C

		10		20		30		40		50		60									
1	GCA	GGC	CGC	CCG	GAG	CCG	GCC	CCG	TAG	CGT	GCC	ATG	GCC	TGC	TAC	ATC	TAC	CAG	CTG	CCC	60
1											M	A	C	Y	I	Y	Q	L	P	9	
		70		80		90		100		110		120									
61	TCC	TGG	GTG	CTG	GAC	GAC	CTG	TGC	CGC	AAC	ATG	GAC	GCG	CTC	AGC	GAG	TGG	GAC	TGG	ATG	120
10	S	W	V	L	D	D	L	C	R	N	M	D	A	L	S	E	W	D	W	M	29
		130		140		150		160		170		180									
121	GAG	TTC	GCC	TCC	TAC	GTG	ATC	ACA	GAC	CTG	ACC	CAG	CTG	CGG	AAG	ATC	AAG	TCC	ATG	GAG	180
30	E	F	A	S	Y	V	I	T	D	L	T	Q	L	R	K	I	K	S	M	E	49
		190		200		210		220		230		240									
181	CGG	GTG	CAG	GGT	GTG	AGC	ATC	ACG	CGG	GAG	CTG	CTG	TGG	TGG	TGG	GGC	ATG	CGG	CAG	GCC	240
50	R	V	Q	G	V	S	I	T	R	E	L	L	W	W	W	G	M	R	Q	A	69
		250		260		270		280		290		300									
241	ACC	GTC	CAG	CAA	CTT	GTG	GAC	CTC	CTG	TGC	CGC	CTG	GAG	CTC	TAC	CGG	GCT	GCC	CAG	ATC	300
70	T	V	Q	Q	L	V	D	L	L	C	R	L	E	L	Y	R	A	A	Q	I	89
		310		320		330		340		350		360									
301	ATC	CTG	AAC	TGG	AAA	CCG	GCT	CCT	GAA	ATC	AGG	TGT	CCC	ATT	CCA	GCC	TTC	CCT	GAC	TCT	360
90	I	L	N	W	K	P	A	P	E	I	R	C	P	I	P	A	F	P	D	S	109
		370		380		390		400		410		420									
361	GTG	AAG	CCA	GAA	AAG	CCT	TTG	GCA	GCT	TCT	GTA	AGA	AAG	GCT	GAG	GAT	GAA	CAG	GAA	GAG	420
110	V	K	P	E	K	P	L	A	A	S	V	R	K	A	E	D	E	Q	E	E	129
		430		440		450		460		470		480									
421	GGG	CAG	CCT	GTG	AGG	ATG	GCC	ACC	TTT	CCA	GGC	CCA	GGG	TCC	TCT	CCA	GCC	AGA	GCC	CAC	480
130	G	Q	P	V	R	M	A	T	F	P	G	P	G	S	S	P	A	R	A	H	149
		490		500		510		520		530		540									
481	CAG	CCG	GCC	TTT	CTC	CAG	CCT	CCT	GAA	GAA	GAT	GCC	CCT	CAT	TCC	TTG	AGA	AGC	GAC	CTC	540
150	Q	P	A	F	L	Q	P	P	E	E	D	A	P	H	S	L	R	S	D	L	169
		550		560		570		580		590		600									
541	CCC	ACT	TCG	TCT	GAT	TCA	AAG	GAC	TTC	AGC	ACC	TCC	ATT	CCT	AAG	CAG	GAA	AAA	CTT	TTG	600
170	P	T	S	S	D	S	K	D	F	S	T	S	I	P	K	Q	E	K	L	L	189
		610		620		630		640		650		660									
601	AGC	TTG	GCT	GGA	GAC	AGC	CTT	TTC	TGG	AGT	GAG	GCA	GAC	GTG	GTC	CAG	GCA	ACC	GAT	GAC	660
190	S	L	A	G	D	S	L	F	W	S	E	A	D	V	V	Q	A	T	D	D	209
		670		680		690		700		710		720									
661	TTC	AAT	CAA	AAC	CGC	AAA	ATC	AGC	CAG	GGG	ACC	TTT	GCT	GAC	GTC	TAC	AGA	GGG	CAC	AGG	720
210	F	N	Q	N	R	K	I	S	Q	G	T	F	A	D	V	Y	R	G	H	R	229
		730		740		750		760		770		780									
721	CAQ	GGG	AAG	CCA	TTC	GTC	TTC	AAG	AAG	CTC	AGA	GAG	ACA	GCC	TGT	TCA	AGT	CCA	GGA	TCA	780
230	H	G	K	P	F	V	F	K	K	L	R	E	T	A	C	S	S	P	G	S	249
		790		800		810		820		830		840									
781	ATC	GAA	AGA	TTC	TTC	CAG	GCA	GAG	TTG	CAG	ATT	TGT	CTT	AGA	TGC	TGC	CAC	CCC	AAT	GTC	840
250	I	E	R	F	F	Q	A	E	L	Q	I	C	L	R	C	C	H	P	N	V	269

FIG. 2A

		850		860		870		880		890		900									
841	TTA	CCT	GTG	CTG	GGC	TTC	TGT	GCT	GCA	AGA	CAG	TTT	CAC	AGC	TTC	ATC	TAC	CCC	TAC	ATG	900
270	L	P	V	L	G	F	C	A	A	R	Q	F	H	S	F	I	Y	P	Y	M	289
		910		920		930		940		950		960									
901	GCA	AAT	GGT	TCC	CTA	CAG	GAC	AGA	CTG	CAG	GGT	CAG	GGT	CGC	TCG	GAC	CCC	CTC	CCC	TGG	960
290	A	N	G	S	L	Q	D	R	L	Q	G	Q	G	G	S	D	P	L	P	W	309
		970		980		990		1000		1010		1020									
961	CCC	CAG	CGT	GTC	AGC	ATC	TGC	TCA	GGG	CTG	CTC	TGT	GCC	GTC	GAG	TAC	CTG	CAT	GGT	CTG	1020
310	P	Q	R	V	S	I	C	S	G	L	L	C	A	V	E	Y	L	H	G	L	329
		1030		1040		1050		1060		1070		1080									
1021	GAG	ATC	ATC	CAC	AGC	AAC	GTC	AAG	AGC	TCT	AAT	GTC	TTG	CTG	GAC	CAA	AAT	CTC	ACC	CCC	1080
330	E	I	I	H	S	N	V	K	S	S	N	V	L	L	D	Q	N	L	T	P	349
		1090		1100		1110		1120		1130		1140									
1081	AAA	CTT	GCT	CAC	CCA	ATG	GCT	CAT	CTG	TGT	CCT	GTC	AAC	AAA	AGG	TCA	AAA	TAC	ACC	ATG	1140
350	K	L	A	H	P	M	A	H	L	C	P	V	N	K	R	S	K	Y	T	M	369
		1150		1160		1170		1180		1190		1200									
1141	ATG	AAG	ACT	CAC	CTG	CTC	CGG	ACG	TCA	GCC	GCG	TAT	CTG	CCA	GAG	GAT	TTC	ATC	CGG	GTG	1200
370	M	K	T	H	L	L	R	T	S	A	A	Y	L	P	E	D	F	I	R	V	389
		1210		1220		1230		1240		1250		1260									
1201	GGG	CAG	GTG	ACA	AAG	CGA	GTG	GAC	ATC	TTC	AGC	TGT	GGA	ATA	GTG	TTG	GCC	GAG	GTC	CTC	1260
390	G	Q	V	T	K	R	V	D	I	F	S	C	G	I	V	L	A	E	V	L	409
		1270		1280		1290		1300		1310		1320									
1261	ACG	GGC	ATC	CCT	GCA	ATG	GAT	AAC	AAC	CGA	AGC	CCG	GTT	TAC	CTG	AAG	GAC	TTA	CTC	CTC	1320
410	T	G	I	P	A	M	D	N	N	R	S	P	V	Y	L	K	D	L	L	L	429
		1330		1340		1350		1360		1370		1380									
1321	AGT	GAA	ATT	CCA	AGC	AGC	ACC	GCC	TCG	CTC	TGC	TCC	AGG	AAG	ACG	GGC	GTG	GAG	AAC	GTG	1380
430	S	E	I	P	S	S	T	A	S	L	C	S	R	K	T	G	V	E	N	V	449
		1390		1400		1410		1420		1430		1440									
1381	ATG	GCA	AAG	GAG	ATC	TGC	CAG	AAG	TAC	CTG	GAG	AAG	GGC	GCA	GGG	AGG	CTT	CCG	GAG	GAC	1440
450	M	A	K	E	I	C	Q	K	Y	L	E	K	G	A	G	R	L	P	E	D	469
		1450		1460		1470		1480		1490		1500									
1441	TGC	GCC	GAG	GCC	CTG	GCC	ACG	GCT	GCC	TGC	CTG	TGC	CTG	CGG	AGG	CGT	AAC	ACC	AGC	CTG	1500
470	C	A	E	A	L	A	T	A	A	C	L	C	L	R	R	R	N	T	S	L	489
		1510		1520		1530		1540		1550		1560									
1501	CAG	GAG	GTG	TGT	GGC	TCT	GTG	GCT	GCT	GTG	GAA	GAG	CGG	CTC	CGA	GGT	CGG	GAG	ACG	TTG	1560
490	Q	E	V	C	G	S	V	A	A	V	E	E	R	L	R	G	R	E	T	L	509
		1570		1580		1590		1600		1610		1620									
1561	CTC	CCT	TGG	AGT	GGG	CTT	TCT	GAG	GGT	ACA	GGC	TCT	TCT	TCC	AAC	ACC	CCA	GAG	GAA	ACA	1620
510	L	P	W	S	G	L	S	E	G	T	G	S	S	S	N	T	P	E	E	T	529
		1630		1640		1650		1660		1670		1680									
1621	GAC	GAC	GTT	GAC	AAT	TCC	AGC	CTT	GAT	GCC	TCC	TCC	TCC	ATG	AGT	GTG	GCA	CCC	TGG	GCA	1680
530	D	D	V	D	N	S	S	L	D	A	S	S	S	M	S	V	A	P	W	A	549

FIG. 2B

1681	GGG	GCT	GCC	ACC	CCA	CTT	CTC	CCC	ACA	GAG	AAT	GGG	GAA	GGA	AGG	CTG	CGG	GTC	ATC	GTG	1740
550	G	A	A	T	P	L	L	P	T	E	N	G	E	G	R	L	R	V	I	V	569
1741	GGA	AGG	GAG	GCT	GAC	TCC	TCC	TCT	GAG	GCC	TGT	GTT	GGC	CTG	GAG	CCT	CCC	CAG	GAT	GTT	1800
570	G	R	E	A	D	S	S	S	E	A	C	V	G	L	E	P	P	Q	D	V	589
1801	ACA	GAA	ACT	TCG	TGG	CAA	ATT	GAG	ATC	AAT	GAG	GCC	AAA	AGG	AAA	CTG	ATG	GAG	AAT	ATT	1860
590	T	E	T	S	W	Q	I	E	I	N	E	A	K	R	K	L	M	E	N	I	609
1861	CTG	CTC	TAC	AAA	GAG	GAA	AAA	GTG	GAC	AGC	ATT	GAG	CTC	TTT	GGC	CCC	TGA	TGA	CCG	GAA	1920
610	L	L	Y	K	E	E	K	V	D	S	I	E	L	F	G	P	*				625
1921	CAC	AGC	TGA	GGA	CCC	TTG	TCC	TCA	GTT	GGA	AAG	ATG	AGC	ATC	AGA	TCA	AGA	AAA	AGG	TCT	1980
1981	GAG	GCA	GAA	TCC	AAG	ATC	TGC	CAG	GAA	ACA	CAC	AAC	AAA	ACA	TCT	GCT	GTC	CTG	GGT	GGG	2040
2041	AGG	GAA	ACT	TCA	TTT	CAC	TGG	AAT	GAG	TTG	GGA	GAG	AAA	GGC	CCT	CAG	CTT	TTA	GAG	ACA	2100
2101	CAA	AAA	TCC	ATG	AAG	TCT	CTT	CCT	TTC	TGG	GCT	TTG	TTA	GTC	AGA	GCA	GGG	GAT	CAG	AGG	2160
2161	AGA	CTG	AAG	CAG	AAA	CCC	TGC	ACA	CGG	GCC	CAG	GAT	GTG	GCT	GAT	TTT	GTG	GTT	CCG	GGG	2220
2221	AGT	ATG	TGA	TGA	TAA	TCA	CCC	CCA	GCA	GAT	TCC	ATT	ACC	TCA	GCA	GCT	CTT	GTT	CCC	CCG	2280
2281	CCA	CTG	GCA	GTT	CTG	CAA	TGC	CAT	AGC	ATT	TTC	CAG	AGC	TAA	GAT	CTC	TGG	GTT	GTA	TTT	2340
2341	GCT	GAC	AGC	CTG	CAA	GCT	TGC	ATG	CTC	TGA	AAG	ATT	TTT	TTA	GTT	TTT	AAT	TTT	TTT	GTA	2400
2401	AAA	ATG	GGG	TCT	CGC	TTT	GTT	GGC	GCA	ATC	CTC	CCA	CCT	CAG	ACT	CCC	AAA	GTG	CTG	GAA	2460
2461	TTA	CAT	TGG	GAA	CCA	CTG	TGC	CTG	GCC	TGG	AAA	ACT	TCC	AAC	TTG	TGT	TCT	CAG	TGC	AGT	2520
2521	TCT	GAC	TCA	CCT	CTC	TGG	GCC	TCA	GGT	TCT	ACA	AAT	GCC	AGA	CAC	CTA	GGC	AAG	AGC	TCT	2580
2581	GCA	GGC	TTT	CCA	CTG	CCT	GTA	TTG	GAA	ATC	TTG	CAA	TTC	ACA	TAA	TTA	TTC	AGT	CAC	TGC	2640
2641	CTG	GTA	CCT	TTA	TCT	TCC	CAT	CCC	ATT	AAT	GTT	AGT	GTT	TTT	TAA	TGG	AGC	TTT	TAT	TCT	2700
2701	GAG	AAT	ATG	TGT	TCG	TCT	GTT	TGT	TTG	TTT	TTT	GAG	ACA	GAG	TCT	CAC	TTT	GTC	ACC	CAG	2760
2761	GCT	GGA	GTG	CAG	TGG	CAC	GAT	CTC	AGC	TCA	CTG	CAA	GCT	GTG	CCT	CTC	AGG	TTT	CAA	GTG	2820

FIG. 2C

	2830	2840	2850	2860	2870	2880	
2821	ATT CTC CTG CCT CAG CCT CCT GAG TAG ATG GGA CTG TAG GCA CCT GCC ACT ATG CCT GGC	2880					
	2890	2900	2910	2920	2930	2940	
2881	TAA TTT TTG TGT TTT TAG TAG AGA CAG GGT TTC ACC ATA TTG GCC AGG CTG GTC TCG AAC	2940					
	2950	2960	2970	2980	2990	3000	
2941	TAC TGA CCT CGT GAT CTG CCC GCC TTG GCC TAT CAA AGT GTT GGG ATT ACA GGC TTG AGC	3000					
	3010	3020	3030	3040	3050	3060	
3001	CAC CGC ACC CGG CCG AGA ATA TGT GTT GTT ATT TAT GAC TGG ATT ATG AAG AAT CAG GAG	3060					
	3070	3080	3090	3100	3110	3120	
3061	AAT GCA TTT CAT GTC TGA TTC TGC TGC TAA TTA AGT CAA TCA TTT AAT TTT TGG GAC CTC	3120					
	3130	3140	3150	3160	3170	3180	
3121	AGT TTC TTT GTA AGT AAA ATA ACA CCT GCT TGT TCT TCA TCC CTG GGC TGT TGG GAG GAA	3180					
	3190	3200	3210	3220	3230	3240	
3181	CAG ATG AGA CAG TGG CTA TAG AAG CAC TTG GAA AAT GCA CTT GTC CTG TTT TGT AAA ATA	3240					
	3250	3260	3270	3280	3290	3300	
3241	AAA AGG TAT TAA ATG TGT ATT TCT GCC ATG TAC CTA ATG ATT ATT CAG TGC GTA TAT ATC	3300					
	3310	3320	3330	3340	3350	3360	
3301	TGA AAA GTC ATG TTG CAA ATC TTT CTG TGA AAC AGA TGC TAT TTT AAA TTC ACT GGG AGA	3360					
	3370	3380	3390	3400	3410	3420	
3361	AAT ATC CTA TTT AAA GTA ATC TAT AGT AAT TTC TTT TTA TAT AAT AAA AAT ATA TTT GTA	3420					
	3430	3440	3450				
3421	AAG TCG AAA AAA AAA AAA AAA AAA AAA AAA AAA AAA	3459					

FIG. 2D

1	MAGGPGGEPAAAPGAQ-----HFLYEVPPIWM-----CRFYKVM	IRAK
1	MSGVQTAEAEAAQANQANGNRTRSRLDNTMAIRLLPLPVRQLCAHLD	Pelle
1	MAC-----YIYQLPSWVL-----DDLCRNMD	HNFIP11X IRAK-2 Alpha
1	MAC-----YIYQLPSWVL-----DDLCRNMD	HNFIP11XX IRAK-2 Beta
36	ALEPADWCQFAALIVRDQTELRLCERSGORTASV-----LWPWINR-NA	IRAK
51	ALDV--WQQLATAVKLYPDQVEQISSQKQ--GRSASNEFLNINGGQYNH	Pelle
22	ALSEWDWMEFASYVITDLTQLRKI-KSMERVQGV SITRELLWWGMR-OA	HNFIP11X IRAK-2 Alpha
22	ALSEWDWMEFASYVITDLTQLRKI-KSMERVQGV SITRELLWWGMR-OA	HNFIP11XX IRAK-2 Beta
79	RVADLVHILTHLQLLRARDITTAWHPPAPLPSPGTTAPRPSSIPAPAEAE	IRAK
97	TVQTLFALFKKLKLNAMRLIKDYVSED-----LHKYIPRSVPTISE	Pelle
70	TVQQLVDLLCRLELYRAAQIILNWKPAEIRCPIPAFPDSVKPEKPLAAS	HNFIP11X IRAK-2 Alpha
70	TVQQLVDLLCRLELYRAAQIILNWKPAEIRCPIPAFPDSVKPEKPLAAS	HNFIP11X IRAK-2 Beta
129	AWSPRKLPSSASTFLSPAFIGSQTHSGPELG---LVPS---PASLWPPP	IRAK
139	LRAAPD--SSAKVNNGPPFPSSSGVSNNNRTSTTATEEIPSLE-----	Pelle
120	VRKAEDEQEEGQPVPMATFPGPGSSPARAHQPAFLQPPEEDAPHSLRSDL	HNFIP11X IRAK-2 Alpha
120	VRKAEDEQEEGQPVPMATFPGPGSSPARAHQPAFLQPPEEDAPHSLRSDL	HNFIP11X IRAK-2 Beta
172	PSPAPSSSTKPGPESSVSLQGARSPFCWPLCEISRGTHNFESEELKIGEG	IRAK
182	--SLGNIHISTVQRAAESLLEID-----YAELENATDGWSPDNRLGQG	Pelle
170	PTSSDSKDFSTSIKQEKLLSLAGDSLFWSEADVQATDDFNQNRKISQG	HNFIP11X IRAK-2 Alpha
170	PTSSDSKDFSTSIKQEKLLSLAGDSLFWSEADVQATDDFNQNRKISQG	HNFIP11X IRAK-2 Beta
222	GFGCVYRAVMRNTVYAVKRLK--ENADLEWTAVKQSFLEVEQLSRFRH	IRAK
223	GFGDVYRGKWKQLDVAIKVMNYRSPNIDQKMVELOQSYN-ELKYLNSIRH	Pelle
220	TFADVYRGHRHGKPFVFKLR---ETACSSPGSIERFFQAEQLQICLRCH	HNFIP11X IRAK-2 Alpha
220	TFADVYRGHRHGKPFVFKLR---ETACSSPGSIERFFQAEQLQICLRCH	HNFIP11X IRAK-2 Beta
269	PNIVDFAGYCAQNGFYCLVYGFLPNGSLEDRLHCOTQACP--PLSWPQRL	IRAK
272	DNILALYGYSIKGQKPCLVYQLMKGGSL EARLRAHKAQNPLALTWQRF	Pelle
267	PNVLPVLGFCARQFHSFIYPYMANGSLQDRLOGQG-GSE--PLPWPQRV	HNFIP11X IRAK-2 Alpha
267	PNVLPVLGFCARQFHSFIYPYMANGSLQDRLOGQG-GSD--PLPWPQRV	HNFIP11X IRAK-2 Beta
317	DILLGTARAIQFLHOD-SPSLIHGDIKSSNVLLDERLTPKLGDFGLARFS	IRAK
322	SISLGTARGIYFLHTARGTPLIHGDIKPANILLDQCLQPKIGDFGLVR--	Pelle
314	SICSGLLCAVEYLH---GLEIITHSNVKSSNVLLDQNLTPKLAH-PMHLC	HNFIP11X IRAK-2 Alpha
314	SICSGLLCAVEYLH---GLEIITHSNVKSSNVLLDQNLTPKLAH-PMHLC	HNFIP11X IRAK-2 Beta
366	RFAGSSPSQSSMVARITQTVRGTLAYLPEEYIKTGRLAVD TDFSGVVVL	IRAK
370	----EGPKSLDAVVEVNKVFGTKIYLPPEFRNFRQLSTGVDVYSFGIVLL	Pelle
360	--PVNKRSKYTMM-KTHLLRTSAAYLPEDFIRVGQLTKRVDIFSCGIVLA	HNFIP11X IRAK-2 Alpha
360	--PVNKRSKYTMM-KTHLLRTSAAYLPEDFIRVGQVTKRVDIFSCGIVLA	HNFIP11X IRAK-2 Beta

FIG.3A

416	ETLAGORAVKTHGARTKYLKDLVEEAEAEAGVALRSTQSTLQAGLAADAW	IRAK
416	EVFTG-RQVTDVRPENETKKNLLD-----YVKQOW	Pelle
407	EVL TGIPAMDNNRSPV-YLKDLLLSEIPSSTASLCSRKTGVENVMAKE--	HNFIPI1X IRAK-2 Alpha
407	EVL TGIPAMDNNRSPV-YLKDLLLSEIPSSTASLCSRKTGVENVMAKE--	HNFIPI1X IRAK-2 Beta
466	AAPIAMQIYKKHLDPRPGPCPPPELGLGLGQLACCLHRRAKRRPPMTQVY	IRAK
445	RQNR-MELLEKHLAAPMGK-----ELDM--CMC-----	Pelle
454	-----ICQKYLEKGAGRLPEDCAEALATAACLCLRRRNTS-----	HNFIPI1X IRAK-2 Alpha
454	-----ICQKYLEKGAGRLPEDCAEALATAACLCLRRRNTS-----	HNFIPI1X IRAK-2 Beta
516	ERLEKLQAVAGVPGHLEAASCIPSPQENSYSSTGRAHSGAAPWQPLA	IRAK
470	-----ATEAGLH-----	Pelle
489	--LQEVCGSVAAVEERL-----RGRETLLPWSGLS	HNFIPI1X IRAK-2 Alpha
489	--LQEVCGSVAAVEERL-----RGRETLLPWSGLS	HNFIPI1X IRAK-2 Beta
566	APSGASQAQAEQLQRGPNQPVESDES LGGLSAALRSWHLTPSCPLDPAPL	IRAK
477	-----	Pelle
517	EGTGSSSNTPEETDDVDNSSLDASSMS-----VAPWA-GAATPLLPT--	HNFIPI1X IRAK-2 Alpha
517	EGTGSSSNTPEETDDVDNSSLDASSMS-----VAPWA-GAATPLLPT--	HNFIPI1X IRAK-2 Beta
616	REAGCPQGDTAGESSWGS GPGSRPTAVEGLALGSSASSSSEPPQIIINPA	IRAK
477	-----CTALDPQDR-----PS	Pelle
559	-----ENEGRLRVIVGREADSSSEACVGLEPPQDVT	HNFIPI1X IRAK-2 Alpha
559	-----ENEGRLRVIVGREADSSSEACVGLEPPQDVTETSWQIEINEA	HNFIPI1X IRAK-2 Beta
666	ROK MVQKLALYEDGALDSLQLSSSSLPGLGLEQDRQGPEESDEFQS	IRAK4
488	MNAVLKRFEFVTD	Pelle
591		HNFIPI1X IRAK-2 Alpha
602	KRKLMENILYKEEKVDSIELFGP	HNFIPI1X IRAK-2 Beta

FIG.3B

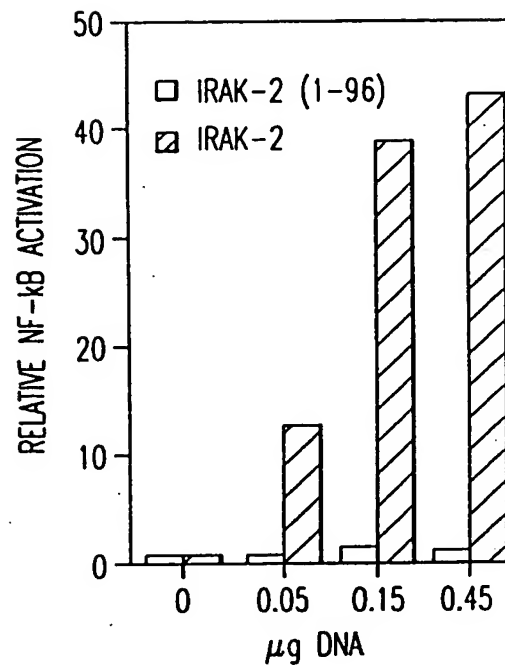


FIG. 4A

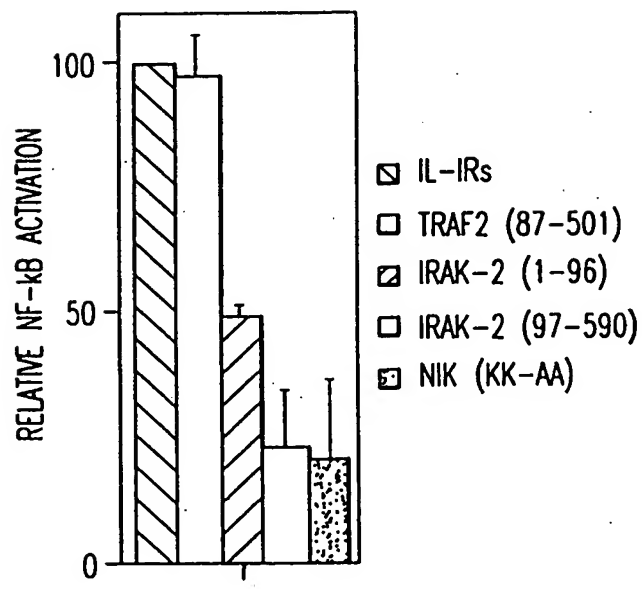


FIG. 4B

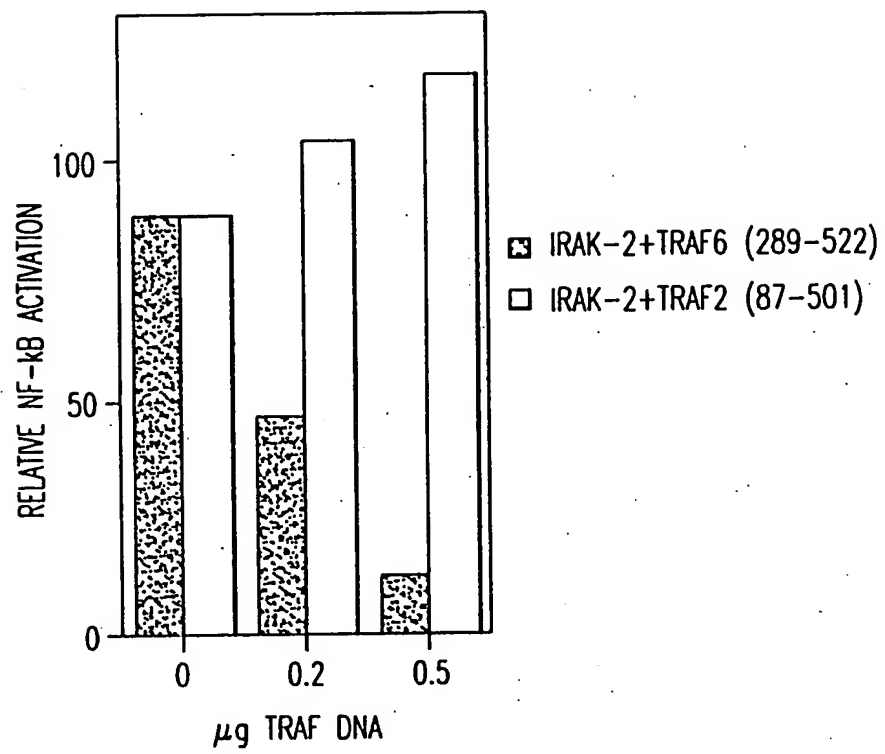


FIG.5

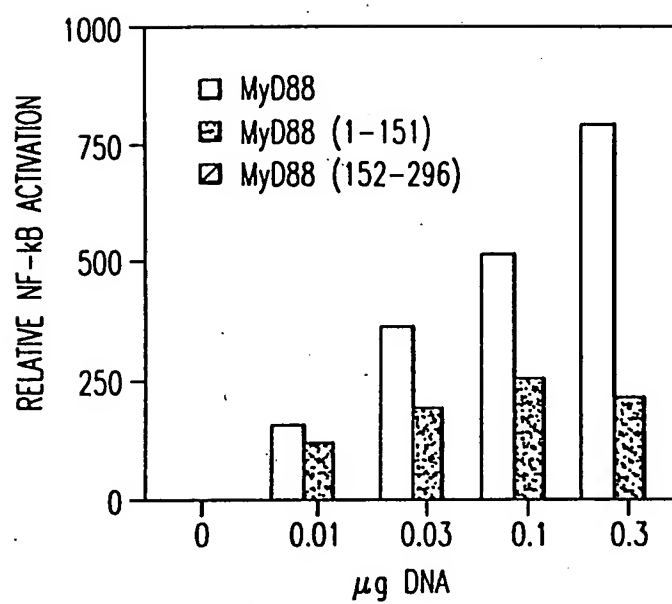


FIG. 6A

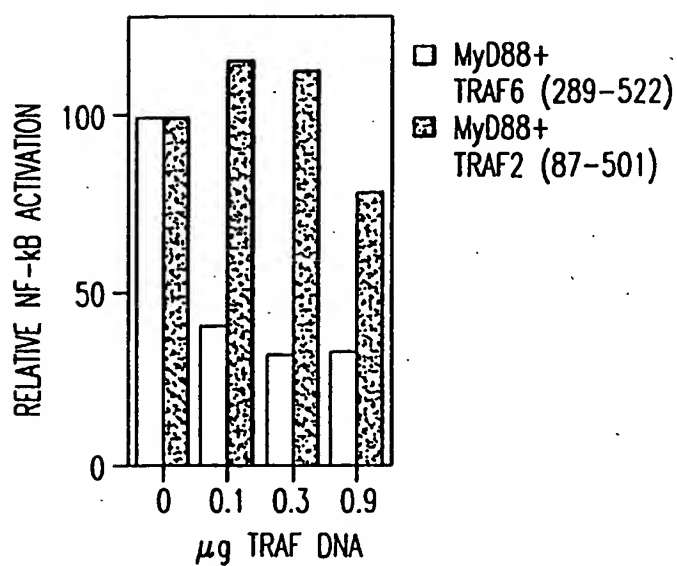


FIG. 6B

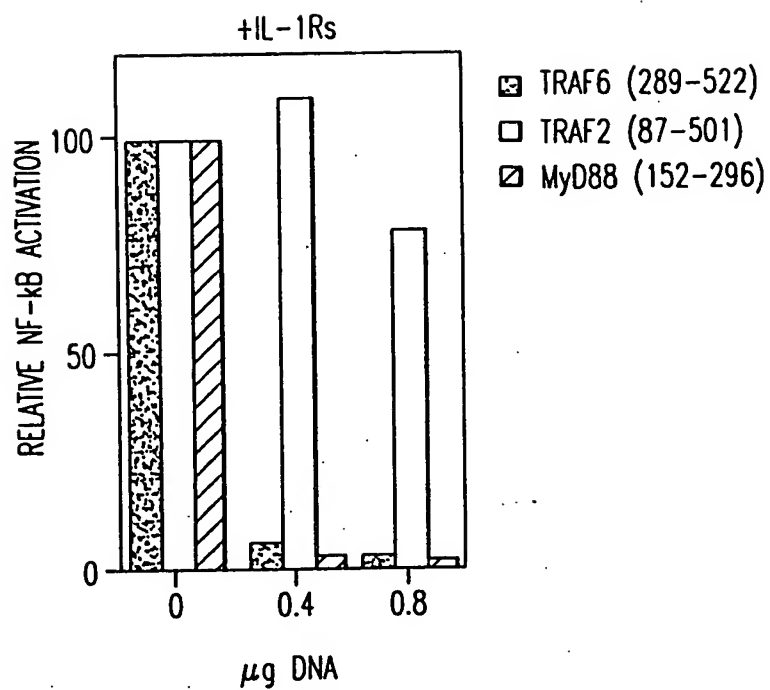


FIG. 7A

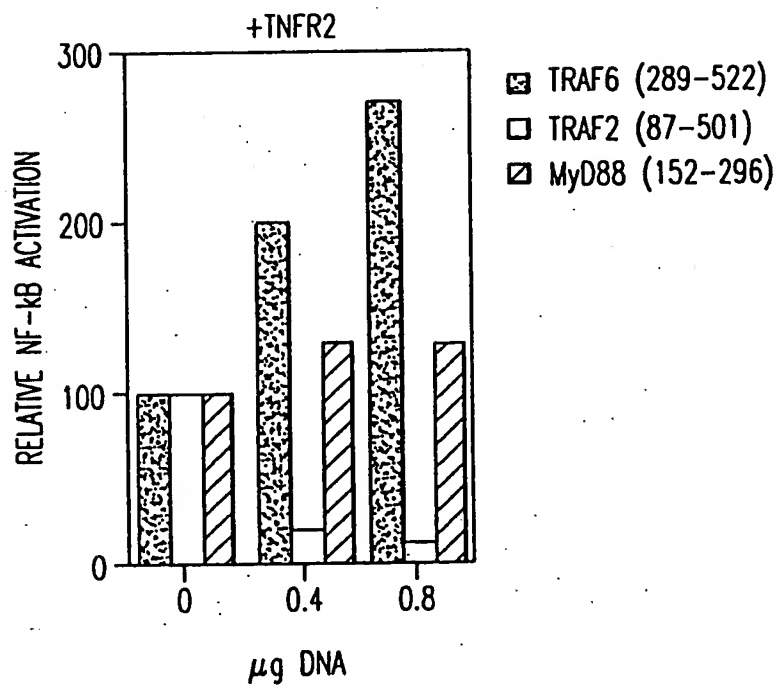


FIG. 7B

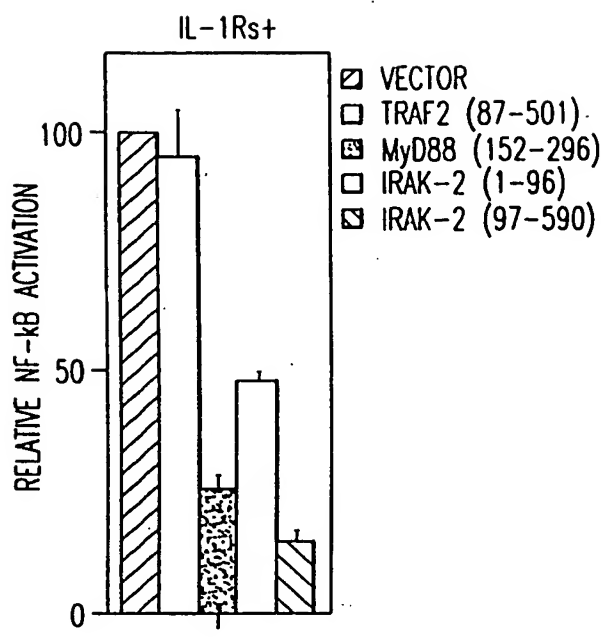


FIG. 8A

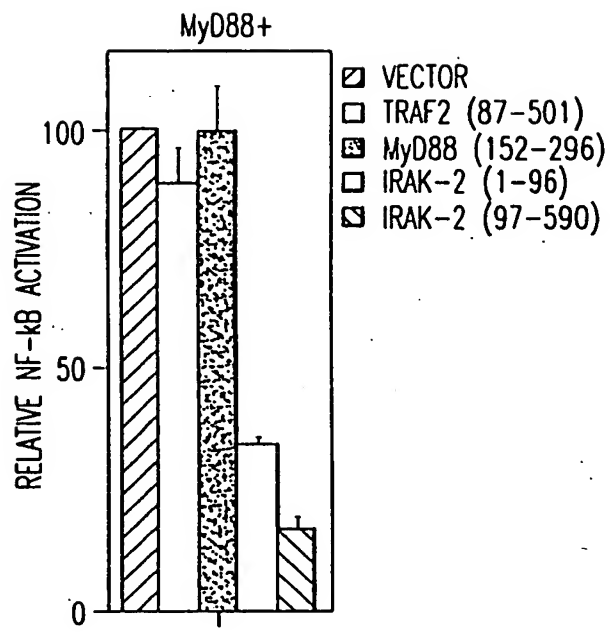


FIG. 8B

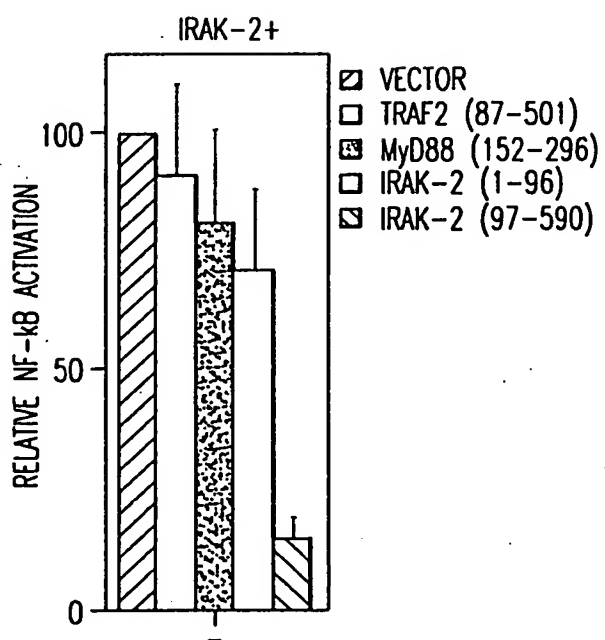


FIG. 8C

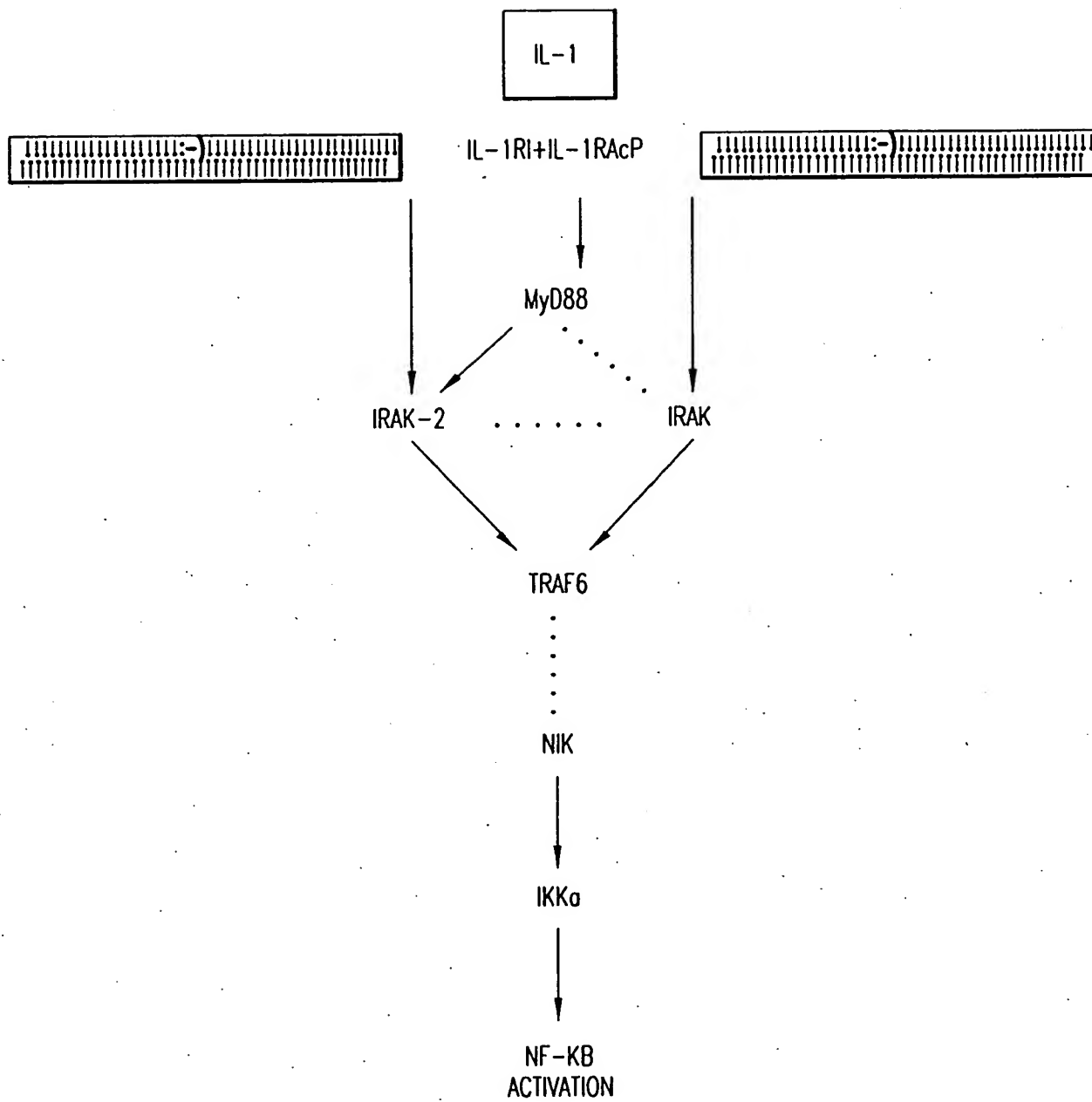


FIG.9

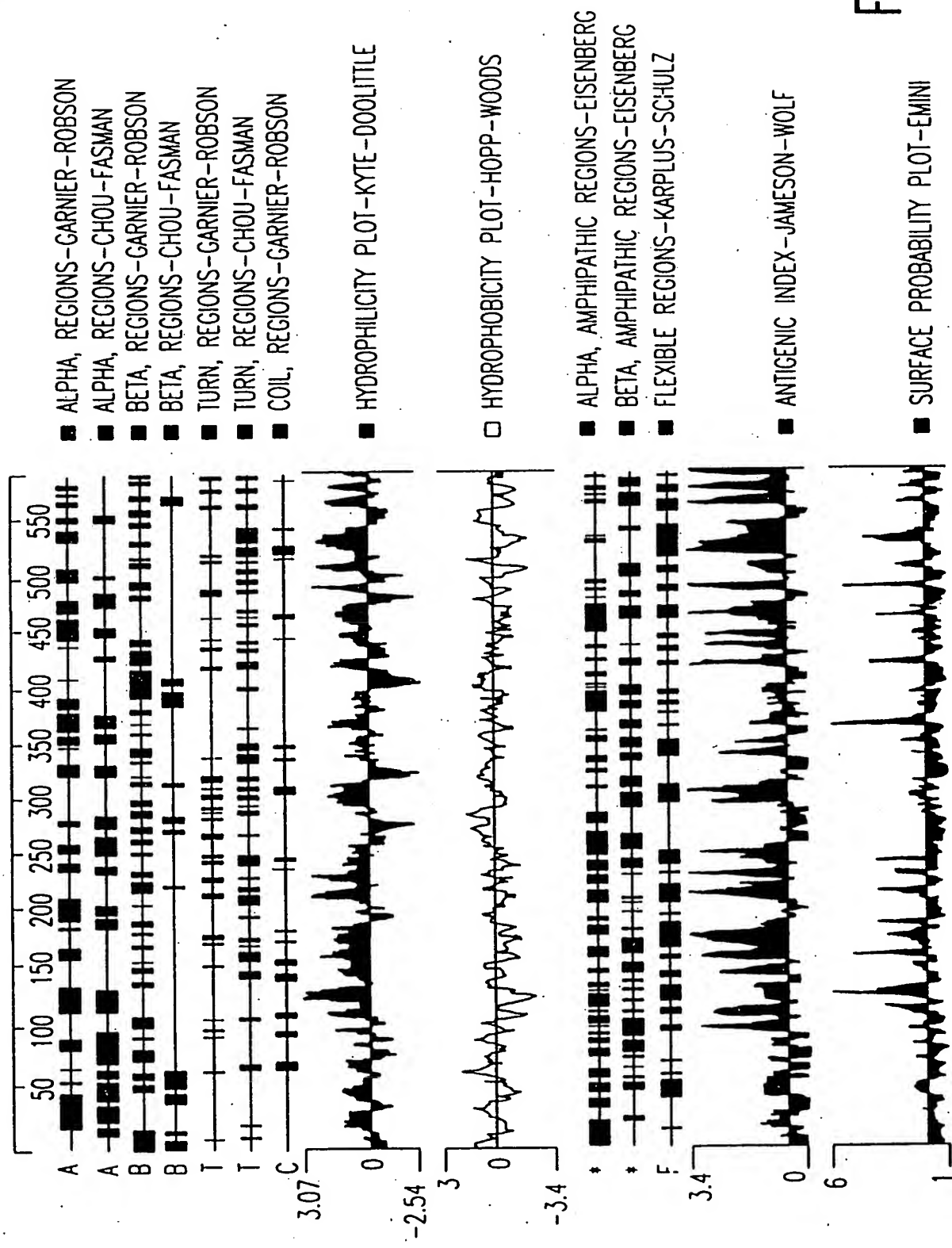


FIG.10

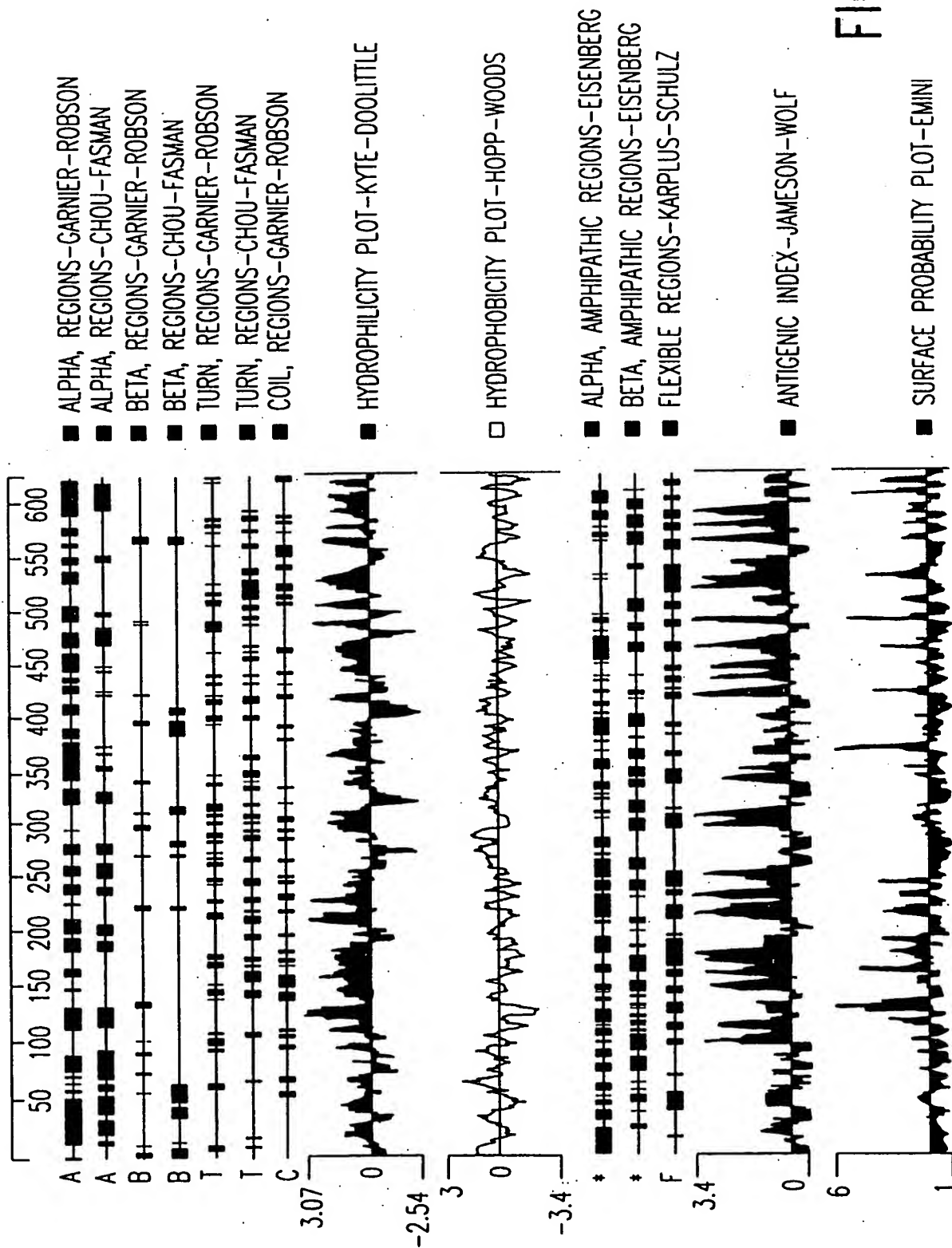


FIG. 11